



\*\*FILE\*\*ID\*\*MTHI IDNNT

G 14

MM MM TTTTTTTTTT HH HH IIIIIII IIIII DDDDDDDDD NN NN NN NN NN TTTTTTTTTT  
MM MM TTTTTTTTTT HH HH IIIIIII IIIII DDDDDDDDD NN NN NN NN NN NN TT  
MMMM Mmmm TT HH HH II II DD DD NN NN NN NN NN NN TT  
MMMM Mmmm TT HH HH II II DD DD NNNN NN NNNN NN NN NN NN TT  
MM MM MM TT HH HH II II DD DD NNNN NN NNNN NN NN NN NN TT  
MM MM MM TT HH HH II II DD DD NNNN NN NNNN NN NN NN NN TT  
MM MM TT HHHHHHHHHHHH II II DD DD NN NN NN NN NN NN NN TT  
MM MM TT HHHHHHHHHHHH II II DD DD NN NN NN NN NN NN NN TT  
MM MM TT HH HH II II DD DD NN NN NNNN NN NNNN NN NN NN TT  
MM MM TT HH HH II II DD DD NN NN NNNN NN NNNN NN NN NN TT  
MM MM TT HH HH II II DD DD NN NN NN NN NN NN NN TT  
MM MM TT HH HH II II DD DD NN NN NN NN NN NN NN TT  
MM MM TT HH HH IIIIIII IIIII DDDDDDDDD NN NN NN NN NN NN TT

The image shows a 10x10 grid of binary symbols. The symbols are arranged to form a central vertical column of 'I's, flanked by two columns of 'L's on the left and two columns of 'S's on the right. The 'L' symbols are positioned in the first and last five rows, while the 'S' symbols are in the second and eighth rows. The 'I' symbols are distributed across all ten rows, with the highest concentration in the middle row.

MTH\$IIDNNT  
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- Nearest Integer

H 14

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(2) 49 HISTORY ; Detailed Current Edit History  
(3) 61 DECLARATIONS  
(4) 87 MTH\$IIDNNT - return nearest integer as INTEGER\*2

0000 1 :TITLE MTH\$IIDNNT - Nearest Integer  
0000 2 :IDENT /2-001/ ; File: MTHIIDNNT.MAR  
0000 3  
0000 4  
0000 5 \*\*\*\*\*  
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0000 24 \*  
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0000 26 \*\*\*\*\*  
0000 27  
0000 28  
0000 29 :FACILITY: MATH LIBRARY  
0000 30 ++  
0000 31 :ABSTRACT:  
0000 32  
0000 33  
0000 34 --  
0000 35  
0000 36 :VERSION: 1  
0000 37  
0000 38 :HISTORY:  
0000 39  
0000 40 :AUTHOR:  
0000 41 Jonathan M. Taylor, 28-Jul-77: Version 0  
0000 42  
0000 43 :MODIFIED BY:  
0000 44  
0000 45 Steven B. Lionel, 19-Feb-79: Version 2  
0000 46  
0000 47 :

MTH\$IIDNNNT  
2-001

- Nearest Integer J 14 16-SEP-1984 01:41:50 VAX/VMS Macro V04-00  
HISTORY ; Detailed Current Edit History 6-SEP-1984 11:25:56 [MTHRTL.SRC]MTHIIDNNNT.MAR;1 Page 2  
(2)

0000 49 .SBTTL HISTORY ; Detailed Current Edit History  
0000 50  
0000 51  
0000 52 : Edit History for Version 1 of MTH\$IIDNNNT  
0000 53  
0000 54 : 0-2 - Remove MTH\$FLAG\_JACKET. TNH 5-July-78  
0000 55 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78  
0000 56 : 1-002 - Add " " to the PSECT directive. JBS 22-DEC-78  
0000 57 : 1-003 - Make it work for negative values and add IV to entry mask.  
0000 58 : SBL 06-Feb-79  
0000 59 : 2-001 - Change to CVTRDL. SBL 19-Feb-1979

0000 61 .SBTTL DECLARATIONS  
0000 62  
0000 63 : INCLUDE FILES:  
0000 64 :  
0000 65 :  
0000 66 :  
0000 67 : EXTERNAL SYMBOLS:  
0000 68 :  
0000 69 :  
0000 70 :  
0000 71 : MACROS:  
0000 72 :  
0000 73 :  
0000 74 :  
0000 75 :  
0000 76 : PSECT DECLARATIONS:  
0000 77 .PSECT \_MTH\$CODE PIC, SHR, LONG, EXE, NOWRT  
0000 78  
0000 79 : EQUATED SYMBOLS:  
0000 80 :  
0000 81 :  
0000 82 :  
0000 83 :  
0000 84 : OWN STORAGE:  
0000 85 :

0000 87 .SBTTL MTH\$IIDNNNT - return nearest integer as INTEGER\*2  
0000 88  
0000 89 :++  
0000 90 : FUNCTIONAL DESCRIPTION:  
0000 91  
0000 92 MTH\$IIDNNNT returns as its function value the INTEGER\*2  
0000 93 integer nearest to its REAL\*8 argument, rounded away from  
0000 94 zero.  
0000 95  
0000 96 : CALLING SEQUENCE:  
0000 97  
0000 98 nearest\_integer.ww.v = MTH\$IIDNNNT (arg.rd.r)  
0000 99  
0000 100  
0000 101 : INPUT PARAMETERS:  
0000 102 arg - REAL\*8 argument  
0000 103  
0000 104 : IMPLICIT INPUTS:  
0000 105 NONE  
0000 106  
0000 107 : OUTPUT PARAMETERS:  
0000 108 NONE  
0000 109  
0000 110 : IMPLICIT OUTPUTS:  
0000 111 NONE  
0000 112  
0000 113 : FUNCTION VALUE:  
0000 114 nearest\_integer - trunc(arg + .5\*sign(arg))  
0000 115  
0000 116 : SIDE EFFECTS:  
0000 117 Reserved operand and integer overflow exceptions may occur.  
0000 118  
0000 119 :--  
0000 120  
0000 121  
0000 122  
0000 123 .ENTRY MTH\$IIDNNNT, ^M<IV>  
0000 124 CVRTDL @4(AP), R0 ; R0 gets rounded argument  
0000 125 CVTLW R0, R0 ; R0 gets INTEGER\*2  
0000 126 RET  
000A 127  
000A 128  
000A 129 .END

50 04 BC 4000  
50 50 F7 0002  
04 0006  
0009  
000A  
000A  
000A

MTH\$IIDNNT  
Symbol table

- Nearest Integer

M 14

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MTH\$IIDNNT 00000000 RG 01

+-----+  
! Psect synopsis !  
+-----+

PSECT name

-----  
. ABS  
\_MTH\$CODE

PSECT name	Allocation	PSECT No.	Attributes	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
. ABS	00000000	( 0.)	00 ( 0.)	NOPIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT NOVEC LONG
_MTH\$CODE	0000000A	( 10.)	01 ( 1.)	PIC	USR	CON		LCL				

+-----+  
! Performance indicators !  
+-----+

Phase

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.08	00:00:01.19
Command processing	107	00:00:00.45	00:00:03.76
Pass 1	65	00:00:00.34	00:00:02.61
Symbol table sort	0	00:00:00.00	00:00:00.02
Pass 2	37	00:00:00.35	00:00:01.72
Symbol table output	1	00:00:00.00	00:00:00.00
Psect synopsis output	3	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	245	00:00:01.25	00:00:09.33

The working set limit was 900 pages.

1223 bytes (3 pages) of virtual memory were used to buffer the intermediate code.

There were 10 pages of symbol table space allocated to hold 1 non-local and 0 local symbols.

129 source lines were read in Pass 1, producing 10 object records in Pass 2.

0 pages of virtual memory were used to define 0 macros.

+-----+  
! Macro library statistics !  
+-----+

Macro library name

-----  
\$\_255\$DUA2B:[SYSLIB]STARLET.MLB;2

Macros defined

0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:\_MTHIIDNNT/OBJ=OBJ\$:\_MTHIIDNNT MSRC\$:\_MTHIIDNNT/UPDATE=(ENH\$:\_MTHIIDNNT)

0262 AH-BT13A-SE  
VAX/VMS V4.0

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